

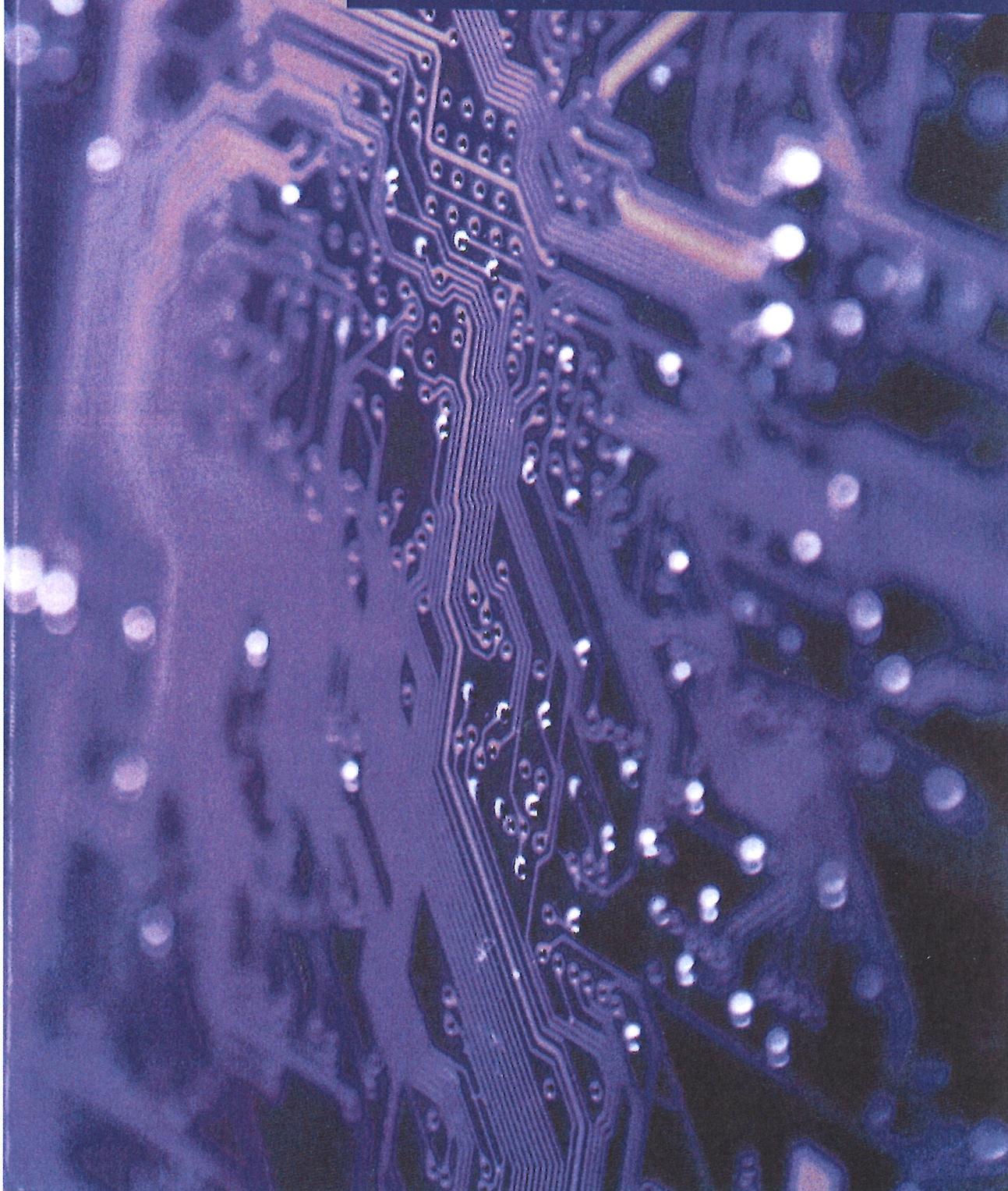
# EXHIBIT K

OXFORD

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DICTIONARY OF  
**COMPUTING**

SIXTH EDITION



A Dictionary of  
**Computing**

SIXTH EDITION

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tions are the \*binomial distribution and the \*Poisson distribution.

**Continuous probability distributions** apply to observations, such as physical measurements, where no two observations are likely to be exactly the same. Since the probability of observing exactly a given value is about zero, a mathematical function, the **cumulative distribution function**,  $F(x)$ , is used instead. This is defined as the probability that the observation does not exceed  $x$ .  $F(x)$  increases monotonically with  $x$  from 0 to 1, and the probability of observing any value between two limits,  $x_1$  and  $x_2$ , is

$$F(x_2) - F(x_1)$$

This definition leads, by differential calculus, to the **frequency function**,  $f(x)$ , which is the limiting ratio of

$$F(x + h) - F(x) \text{ to } h$$

as  $h$  becomes small, so that the probability of an observation between  $x$  and  $(x + h)$  is  $h \cdot f(x)$ . The most important continuous distribution is the \*normal (or Gaussian) distribution.

Probability distributions are defined in terms of \*parameters, whose values determine the numerical values of the probabilities.

**probit analysis** A statistical technique used to relate the proportion of subjects responding to the strength of an applied stimulus. The stimulus is often applied in a series of increasing amounts in geometrical progression, and the proportion responding is modeled by the cumulative normal frequency distribution (see PROBABILITY DISTRIBUTIONS). The method estimates the median effective stimulus or  $LD_{50}$  and the slope of the response. It is widely used in pharmacology, biology, and in testing the safety of products.

**problem definition** A precise statement of some problem to be solved, with the emphasis on providing a complete and unambiguous definition of the problem rather than an easy introduction to it.

**problem description** A self-contained overview of some problem to be solved, perhaps with accompanying information on constraints that the solution must respect, possible approaches to the solution, etc.

**problem-oriented language** A programming language whose control struc-

tures and (in particular) data structures reflect in some measure the characteristics of a class of problems, e.g. commercial data processing or scientific computation. By contrast, the structures of a machine-oriented language reflect the internal structure of the underlying machine.

**procedural abstraction** The principle that any operation that achieves a well-defined effect can be treated by its users as a single entity, despite the fact that the operation may actually be achieved by some sequence of lower-level operations (see also ABSTRACTION). Procedural abstraction has been extensively employed since the early days of computing, and virtually all programming languages provide support for the concept (e.g. the SUBROUTINE of Fortran, the procedure of Algol, Pascal, Ada, the function of C, C++, and Java).

**procedural cohesion** See COHESION.

**procedural language** An \*imperative \*procedure-oriented language.

**procedure** A section of a program that carries out some well-defined operation on data specified by \*parameters. It can be \*called from anywhere in a program, and different parameters can be provided for each call.

The term procedure is generally used in the context of high-level languages; in assembly language the word \*subroutine is more commonly employed.

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**procedure-oriented language** A programming language that enables a program to be specified by defining a collection of \*procedures. These procedures may call each other, and are called by the main program (which can itself be regarded as a procedure).

**process** 1. (task) A stream of activity. A process is defined by its code, i.e. the ordered set of machine instructions defining the actions that the process is to take, the contents of its \*workspace, i.e. the set of data values that it can read, write, and manipulate, and its \*process descriptor, which defines the current status of any resources that are allocated to the process. 2. To carry out the actions defined by the sequence of instructions that make up the code of a program.

**process algebra** The algebraic study of abstract computing processes. Suppose that